

This listing of claims replaces all prior versions, and listings, of claims in this application.

**Listing of Claims:**

- 1-15. (Cancelled).
16. (New) A method of calibrating an instrument, comprising:
  - detecting a conductive area of the instrument;
  - detecting a reflective area of the instrument;
  - determining both a horizontal and a vertical position of a movable component of the instrument based on said steps of detecting; and
  - calibrating the instrument based on the position.
17. (New) The method of claim 16, wherein the position comprises three coordinates.
18. (New) The method of claim 16, wherein the step of detecting a conductive area is performed by an electrical sensor of a gripper device.
19. (New) The method of claim 16, wherein the step of detecting a reflective area is performed by an optical sensor of a sample arm.
20. (New) The method of claim 19, wherein the sample arm includes a gripper device having fingers, and wherein the optical sensor projects a light beam between the fingers.

21. (New) The method of claim 16, wherein the reflective area is located on a circular member, the circular member comprising one of a sample tray and a rotating table.
22. (New) The method of claim 16, wherein the conductive area is located on a circular member, the circular member comprising one of a sample tray and a rotating table.
23. (New) The method of claim 21, wherein the circular member is a rotating table, and wherein the rotating table is coupled to a sample tray.
24. (New) The method of claim 22, wherein the circular member is a rotating table, and wherein the rotating table is coupled to a sample tray.
25. (New) The method of claim 21, wherein the position is the location of a well on the sample tray.
26. (New) The method of claim 22, wherein the position is the location of a well on the sample tray.
27. (New) The method of claim 16, wherein the reflective area is located on a cell.
28. (New) The method of claim 16, wherein the reflective area is located on a calibration fixture coupled to a cell.
29. (New) The method of claim 16, wherein the conductive area is located on a cell.

30. (New) The method of claim 16, wherein the conductive area is located on a calibration fixture coupled to a cell.
31. (New) A method of calibrating a thermal analysis instrument, comprising:  
detecting a conductive area located on a circular member of the thermal analysis instrument;  
detecting a reflective area of the thermal analysis instrument;  
determining a position of a movable component of the thermal analysis instrument based on said steps of detecting;  
the circular member comprising one of a sample tray and a rotating table; and  
calibrating the thermal analysis instrument based on the position of the movable component.
32. The method of claim 31, wherein the circular member is a rotating table and wherein the rotating table is coupled to a sample tray.
33. The method of claim 31, wherein the position is the location of a well on the sample tray.
34. A method of calibrating a thermal analysis instrument, comprising:  
detecting a conductive area of the thermal analysis instrument;

detecting a reflective area of the thermal analysis instrument, the reflective area located on one of a cell and a calibration fixture coupled to a cell;

determining a position of a movable component of the thermal analysis instrument based on said steps of detecting; and

calibrating the thermal analysis instrument based on the position of the movable component.

35. A method of calibrating a thermal analysis instrument, comprising:

detecting a conductive area of the thermal analysis instrument, the conductive area located on one of a cell and a calibration fixture coupled to a cell;

detecting a reflective area of the thermal analysis instrument;

determining a position of a movable component of the thermal analysis instrument based on said steps of detecting; and

calibrating the thermal analysis instrument based on the position of the movable component.